Sediment Background Discussion

Types of sources	Non-anthropogenic background	"Natural" background	"Regional" Background	"Area" background
From PLP discharge				
Other significant identifiable discharges/sites				
Contaminated "hotspots"				
Widespread sediment contamination in an embayment or river reach w/o an identifiable PLP.				
Widespread contamination from numerous unidentifiable sources or diffuse sources.				
Unidentifiable upstream sources – anthropogenic.				
Regionally distributed aerial deposition sources.				
Globally distributed aerial deposition sources.				
Non-anthropogenic upstream sources.				
Possible Scale		East WA, West WA With exceptions for non-anthropogenic inputs.	Square miles Embayment	acres

White = not included in definition
Gray = not clear if included or not
Black = is included in definition

Comment [AC(1)]: Included or not?

Comment [AC(2)]: Included or not?

Types of sources

Sediment sources

- Contaminated sites, hotspots.
- Widespread (baywide) elevated levels.
- Upstream, watershed sources of sediment contamination, anthropogenic.
- Upstream, watershed sources of sediment, non-anthropogenic.

Discharge sources

- Identifiable individual NPDES dischargers.
- General permits, blended discharges.
- Unidentified discharges, groundwater contamination, overland flow.

Sediment Background Discussion

Aerial Deposition

- Local sources – dust from site.
- Regional sources – boat and auto emissions, phthalates.
- Global sources – mercury, PCB, dioxin.

Sediment Background Discussion

Definitions of Regional Background

"*Hydrodynamically-defined area based on mechanisms of contribution and distribution of persistent, ubiquitous and uncontrollable contaminants.*"

Other proposed definitions of background for setting cleanup levels:

1. Habitat-stratified background.
2. Tie regional background to conceptual site model – relevance of sources, resuspension.
3. Use watershed approach. Have regional background determined in each watershed – what is attainable looking at sources, prioritizing sites for cleanup.
4. Set regional background at projected level of "recontamination".
5. "Local conditions" – background concentrations resulting from permitted NPDES discharges.
6. Background concentrations based on what is attainable after "All Known and Reasonable Treatment" (AKART) has been applied to sources.
7. Sample sites located away from point sources.
8. Set regional background based on a "pay-off" point – what cleanup goal would get the most cleanups done.
9. Background based on levels where it is not feasible to remediate.
10. Background based on levels where you cannot identify discharges or there are too many discharges to name all as PLP.